

IN THE CLAIMS:

Please amend the claims as follows:

1. (currently amended) A process for manufacturing a silicoaluminophosphate crystalline molecular sieve of pure LEV or CHA structure, the process comprising the steps of: (a) providing sources of aluminium, of phosphorus and of silicon, wherein the source of silicon is in solution with a water-miscible organic base; (b) forming a synthesis mixture from said sources; and (c) treating the synthesis mixture for a period of time and at a temperature sufficient to form the silicoaluminophosphate crystalline molecular sieve.
2. (original) The process of claim 1, wherein the source of silicon is in solution in a water-miscible liquid organic base or an aqueous solution of a solid organic base.
3. (original) The process of claim 2 wherein the water-miscible liquid organic base is in an admixture with water.
4. (original) The process of claim 2 wherein the water-miscible liquid organic base functions as a structure-directing agent.
5. (original) The process of claim 4 wherein the structure-directing agent is tetraethylammonium hydroxide (TEAOH).
6. (original) The process of claim 4 wherein the structure-directing agent is a combination of tetraethylammonium hydroxide and dipropylamine.
7. (original) The process of claim 1, wherein at least part of the process is carried out with agitation of the synthesis mixture.

B1

8. (original) The process of claim 1 wherein the silicoaluminophosphate crystalline molecular sieve is SAPO-34.
9. (original) The process of claim 1 wherein the source of silicon comprises an inorganic silicon compound.
10. (original) The process of claim 9 wherein the inorganic silicon compound is a colloidal silica.
11. (original) The process of claim 1 wherein the silicoaluminophosphate crystalline molecular sieve has a mean particle size of at most 400nm.
12. (original) The process of claim 1 wherein the silicoaluminophosphate crystalline molecular sieve is subjected to the step(s) of one or more of the group consisting of: washing, cation exchange and calcining.
13. (currently amended) A calcined molecular sieve produced by the process of claim 1.
14. (cancelled)
15. (currently amended) A process for manufacturing a pure SAPO-34, the process comprising the steps of: (a) providing a source of aluminium and a source of phosphorus, (b) combining a source of silicon with a water-miscible liquid organic base or an aqueous solution of a solid organic base in an amount sufficient to form a SAPO-34 having a mean particle size of at most 400nm; (c) forming a synthesis mixture from the combination of said sources in steps (a) and (b); and (d) subjecting the synthesis mixture to hydrothermal treatment.

B1
16. (currently amended) A calcined crystalline silicoaluminophosphate molecular sieve comprising crystals, wherein at least 50% of the crystals by number are smaller than 100 nm ~~having a mean particle size of at most 400 nm.~~

17. (new) The molecular sieve of claim 16, wherein at least 50% of the crystals by number are smaller than 50 nm.

18. (new) The molecular sieve of claim 16, wherein at least 90% of the crystals by number are smaller than 100 nm.

B2
19. (new) The process of claim 1, wherein the silicoaluminophosphate crystalline molecular sieve comprises particles having a mean particle size of at most 400 nm.

20. (new) The process of claim 19, wherein the mean particle size is at most 200 nm.

21. (new) The process of claim 19, wherein the mean particle size is at most 100 nm.

22. (new) The process of claim 19, wherein the mean particle size is at most 50 nm.

23. (new) The process of claim 1, wherein the silicoaluminophosphate molecular sieve comprises crystals, wherein at least 50% of the crystals by number are smaller than 100 nm.

24. (new) The process of claim 23, wherein at least 50% of the crystals by number are smaller than 50 nm.

25. (new) The process of claim 23, wherein at least 90% of the crystals by number are smaller than 100 nm.

26. (new) A process for manufacturing a silicoaluminophosphate crystalline molecular sieve, the process comprising the steps of: (a) providing sources of aluminium, of phosphorus and of silicon, wherein the source of silicon is in solution with a water-miscible organic base; (b) forming a synthesis mixture from said sources; and (c) treating the synthesis mixture for a period of time and at a temperature sufficient to form the silicoaluminophosphate crystalline molecular sieve, wherein at least 50% of the silicoaluminophosphate crystalline molecular sieve particles are smaller than 100 nm.

Bz

27. (new) The process of claim 2 wherein the water-miscible liquid organic base functions as a structure-directing agent.

28. (new) The process of claim 27 wherein the structure-directing agent is tetraethylammonium hydroxide (TEAOH).

29. (new) The process of claim 27 wherein the structure-directing agent is a combination of tetraethylammonium hydroxide and dipropylamine.

30. (new) The process of claim 26, wherein at least part of the process is carried out with agitation of the synthesis mixture.

31. (new) The process of claim 26, wherein the silicoaluminophosphate crystalline molecular sieve is SAPO-34.

32. (new) The process of claim 26, wherein at least 50% of the particles by number are smaller than 50 nm.

33. (new) The process of claim 26, wherein at least 90% of the crystals by number are smaller than 100 nm.

34. (new) A process for manufacturing a silicoaluminophosphate crystalline molecular sieve, the process comprising the steps of: (a) dissolving a source of silicon by heating in a water-miscible organic base; (b) providing sources of aluminium and of phosphorus; (c) forming a synthesis mixture from said sources; and (d) treating the synthesis mixture for a period of time and at a temperature sufficient to form the silicoaluminophosphate crystalline molecular sieve.

B2
Cont

35. (new) The process of claim 34, wherein the water-miscible liquid organic base functions as a structure-directing agent.

36. (new) The process of claim 35, wherein the structure-directing agent is tetraethylammonium hydroxide (TEAOH).

37. (new) The process of claim 35, wherein the structure-directing agent is a combination of tetraethylammonium hydroxide and dipropylamine.

38. (new) The process of claim 34, wherein at least part of the process is carried out with agitation of the synthesis mixture.

39. (new) The process of claim 34, wherein the silicoaluminophosphate crystalline molecular sieve is SAPO-34.

40. (new) The process of claim 34, wherein the silicoaluminophosphate crystalline molecular sieve comprises particles having a mean particle size of at most 400 nm.

41. (new) The process of claim 40, wherein the mean particle size is at most 200 nm.

42. (new) The process of claim 40, wherein the mean particle size is at most 100 nm.

43. (new) The process of claim 40, wherein the mean particle size is at most 50 nm.

*br
cont*

44. (new) The process of claim 34, wherein the silicoaluminophosphate molecular sieve comprises crystals, wherein at least 50% of the crystals by number are smaller than 100 nm.

45. (new) The process of claim 44, wherein at least 50% of the crystals by number are smaller than 50 nm.

46. (new) The process of claim 44, wherein at least 90% of the crystals by number are smaller than 100 nm.